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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207161N: <i>Tactical Aim Missiles</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	2.232	0.912	8.765	-	8.765	4.980	0.799	0.815	0.829	Continuing	Continuing
0457: <i>AIM-9X</i>	2.232	0.912	8.765	-	8.765	4.980	0.799	0.815	0.829	Continuing	Continuing

A. Mission Description and Budget Item Justification

The AIM-9X Sidewinder short-range air-to-air missile is a long term evolution of the AIM-9 series of fielded missiles. The AIM-9X missile program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air missile (AMRAAM). Air superiority in the short-range air-to-air missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M (fuze, rocket motor and warhead). Anti-Tamper features have been incorporated to protect improvements inherent in this design. AIM-9X is a Post Milestone III, Acquisition Category IC joint service program with Navy lead.

The program continues in full rate production (FRP) with Lot 10 contract awarded in June 2010. Beginning with the Lot 9 contract award, the missile will include the preplanned product improvements that resolve critical obsolescence associated with the central processing unit processors and appropriate software updates. This budget line item will fund the development, test and integration of software updates to the missile, insensitive munitions improvements and aircraft platform integration, to ensure these capabilities perform in accordance with established requirements.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	2.288	0.912	0.931	-	0.931
Current President's Budget	2.232	0.912	8.765	-	8.765
Total Adjustments	-0.056	-	7.834	-	7.834
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.034	-			
• Program Adjustments	-	-	7.931	-	7.931
• Section 219 Reprogramming	-0.022	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.097	-	-0.097

Change Summary Explanation

Technical: Not applicable.

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<p>Schedule:</p> <p>Qualification of the Tactical missile Active Optical Target Detector (AOTD) is complete. Pending successful MS-C decision, the new AOTD will be incorporated into the missile beginning with the Lot 11 (FY11) Low Rate Initial Production contract.</p> <p>OT-IIIC period has been separated into OT-IIIC(1) Captive Air Training Missile (CATM) operational test and OT-IIIC(2) All Up Round (AUR) operational test, consistent with fielding of the missiles.</p> <p>CATM OT-IIIC(1) start was revised from 2nd Qtr FY 2010 to 4th Qtr FY 2010 due to delay of test asset availability as a result of Qual test delays. AUR OT-IIIC(2) is planned for 1st Qtr 2012 through 2nd Qtr FY2012, pending successful MS-C approval.</p> <p>The award date of the Lot 11 contract has been revised From December 2010 to March 2011, due to extended contract negotiations with the prime vendor. The award dates for Lots 12-15 have been revised from December to January each year due to Contractor production planning and scheduling.</p> <p>Completion of OT-IIIC has been extended from 1st Qtr FY 2013 to 2nd Qtr 2013 to accomodate the software development schedule.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207161N: Tactical Aim Missiles				PROJECT 0457: AIM-9X			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0457: AIM-9X	2.232	0.912	8.765	-	8.765	4.980	0.799	0.815	0.829	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note In FY12 \$4M was moved from WPN to RDT&E to complete software development as part of Milestone C (MS-C) approval.											
A. Mission Description and Budget Item Justification AIM-9X (Sidewinder) is a long-term evolution of the AIM-9, a fielded system, qualifying this as a research category operational systems development. The AIM-9X short range Air-to-Air missile modification program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the AMRAAM. Air superiority in the short range Air-to-Air Missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M (fuze, rocket motor and warhead).											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012	
Title: Continued Test and Evaluation of System Articles: Description: Funding required for Test & Evaluation and associated Governmental support required to ensure the AIM-9X missile integration with threshold US Navy aircraft platforms. FY 2010 Accomplishments: Completed v9.2 Developmental Test (DT-IIIC), and intitiated the first phase of Operational Testing (OT-IIIC(1)), of missile software rehosting into the new AIM-9X CATM components. Initiated Development Testing (DT-IIID) of the follow on missile software (v9.3) for the AIM-9X missile integration. FY 2011 Plans: Complete first phase of Operational Testing (OT-IIIC(1)) of missile software rehosting into new AIM-9X components. Complete Development Testing (DT-IIID) and begin Integrated (Develoment and Operational) Testing (IT-IIID) of the follow on missile software (v9.3) for the AIM-9X missile integration. FY 2012 Plans: Complete final phase of Operational Testing (OT-IIIC(2)) of missile software rehosting into new AIM-9X components. Complete Integrated (Develoment and Operational) Testing (IT-IIID) and begin Operational Testing (OT-IIID) of the follow on missile software (v9.3) for the AIM-9X missile integration.								0.015	0.606	4.628	
								0	0	0	
Title: Continued Product Development								2.042	0.150	4.000	

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207161N: <i>Tactical Aim Missiles</i>	PROJECT 0457: <i>AIM-9X</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
<p>Articles:</p> <p>Description: Continuation of Primary Hardware Development/Pre-Planned Product Improvement efforts for the AIM-9X fuze. Includes Systems Engineering / Program management, as well as support required to ensure AIM-9X missile integration with threshold US Navy aircraft platforms. Includes efforts to update missile components in order to comply with Insensitive Munitions requirements as established by Joint Requirements Oversight Council memo dated 11 February 2009.</p> <p>FY 2010 Accomplishments: Completed development and qualification of the Active Optical Target Detector (AOTD) Pre-Planned Product Improvement (P3I), also known as the new fuze. Completed v9.2 Software Algorithm and Code Development (CATM only) in support of the AIM-9X missile integration effort. Initiated v9.3 Algorithm Development.</p> <p>FY 2011 Plans: Continued refinement of v9.3 Software Algorithm and Code Development in support of the AIM-9X missile testing and integration effort with threshold US Navy aircraft platforms.</p> <p>FY 2012 Plans: Continued refinement of v9.3 Software Algorithm and Code Development in support of the AIM-9X missile testing and integration effort with threshold US Navy aircraft platforms, as well as study insensitive munitions alternatives and risk reduction methods.</p>		0	0	0
<p>Title: Continued Transportation & Travel for Program Management</p> <p>Articles:</p> <p>Description: Transportation / Travel for AIM-9X effort.</p> <p>FY 2010 Accomplishments: Completed transportation and travel tasks associated with supporting the AIM-9X missile program.</p> <p>FY 2011 Plans: Continued transportation and travel costs associated with supporting the AIM-9X missile program.</p> <p>FY 2012 Plans: Continued transportation and travel costs associated with supporting the AIM-9X missile program.</p>		0.175 0	0.156 0	0.137 0
Accomplishments/Planned Programs Subtotals		2.232	0.912	8.765

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207161N: <i>Tactical Aim Missiles</i>	PROJECT 0457: <i>AIM-9X</i>	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• WPN 2209: <i>Sidewinder</i>	53.679	55.216	47.098	0.000	47.098	51.834	61.097	62.074	62.925	707.470	1,422.061
• MPAF 3479: <i>Sidewinder</i>	78.527	64.523	88.769	0.000	88.769	87.785	82.729	83.212	83.626	554.348	1,533.108
• RDTE, AF 41: <i>Sidewinder</i>	5.890	6.040	8.023	0.000	8.023	8.219	9.675	10.710	12.766	0.000	114.173

D. Acquisition Strategy

The Low-Rate Initial Production (LRIP) 4, LOT 4, Firm-Fixed-Price (FFP) contract was awarded in April 2004. ASN(RD&A) approved the Full-Rate Production (FRP) decision in May 2004. FRP 1, LOT 5 contract was awarded November 2004. FRP 1, LOT 5 through FRP 3 LOT 7 contracts were awarded November 2006. Rewards or penalties are provided depending on Raytheon Missile Systems Performance relative to the Procurement Price Commitment Curve (PPCC) for LOTs 5 through 7 (FY 2005 through FY 2007). FRP 4 LOT 8 (FY 2008) contract was re-negotiated outside of the PPCC, and was awarded in January 2008. The FRP 5 LOT 9 (FY 2009) contract was awarded in June 2009, and incorporated the new electronics unit into the Captive Air Training Missile resolving critical obsolescence issues, as well as a low quantity of test articles to prove out the capability and producibility of the AIM-9X missile. The FRP 6 Lot 10 (FY 2010) contract was awarded in June 2010 to procure Block I All Up Round missiles as well as additional tactical test articles.

Following successful AIM-9X Block II Milestone C approval in 3rd quarter FY 2011, the program will enter into LRIP contracts for Block II in FY 2011 and FY 2012, followed by Block II FRP in FY 2013 and beyond. In the event that a Block II program is not approved, the services will continue to procure the less capable equipped missile in Lot 11.

E. Performance Metrics

The AIM-9X Sidewinder program is meeting the cost, schedule, performance, funding and life cycle sustainment in accordance with the Acquisition Program Baseline. Contractor is meeting production schedule.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207161N: <i>Tactical Aim Missiles</i>	PROJECT 0457: <i>AIM-9X</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hdw Development (Navy Fuze/OFS)	C/CPIF	Raytheon Missile Systems:Tucson, AZ	3.100	-		-		-		-	Continuing	Continuing	Continuing
Primary Hdw Development (Fuze P3I)	SS/CPFF	Raytheon Missile Systems:Tucson, AZ	14.290	-		-		-		-	0.000	14.290	14.290
Aircraft Integration	C/CPFF	Boeing:St. Louis, MO	6.996	-		-		-		-	Continuing	Continuing	Continuing
Aircraft Integration	WR	NAWC WD:China Lake, CA	4.087	-		-		-		-	Continuing	Continuing	Continuing
Munition Improvement Study	SS/CPFF	Raytheon Missile Systems:Tucson, AZ	-	-		1.000	Mar 2012	-		1.000	1.000	2.000	2.000
Systems Engineering	WR	NAWC WD:China Lake, CA	36.731	0.150	Nov 2010	3.000	Nov 2011	-		3.000	Continuing	Continuing	Continuing
All Prod Dev Cost from program implementation through FY 2002	Various	Not Specified:Not Specified	192.194	-		-		-		-	0.000	192.194	192.194
Subtotal			257.398	0.150		4.000		-		4.000			

Remarks

Total prior years - FY95 and prior under PE 0603715D. FY12 and FY13 funds warhead improvements to comply with insensitive munitions requirements.

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval (WD)	WR	NAWC WD:China Lake, CA	29.843	0.071	Nov 2010	-		-		-	Continuing	Continuing	Continuing
Navy Test & Eval (Govt Op Test - WD)	WR	NAWC WD:China Lake, CA	0.279	0.535	Nov 2010	0.615	Nov 2011	-		0.615	Continuing	Continuing	Continuing
Navy Test & Eval (Cont Dev Test)	SS/CPFF	Raytheon Missile Systems:Tucson, AZ	0.210	-		3.998	Mar 2012	-		3.998	0.000	4.208	4.208
Oper Test & Eval (OPTEVFOR)	WR	OPTEVFOR:Norfolk, VA	2.861	-		0.015	Nov 2011	-		0.015	Continuing	Continuing	Continuing
	Various	Various:Various	4.927	-		-		-		-	0.000	4.927	4.927

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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
All Prod Dev Cost from Program Implementation thru FY2002													
Subtotal			38.120	0.606		4.628		-		4.628			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Transportation - Material	WR	NAVAIR:Patuxent River, MD	0.070	0.016	Nov 2010	0.016	Nov 2011	-		0.016	Continuing	Continuing	Continuing
Travel - Obligation throughout the year	WR	NAWC AD:Patuxent River, MD	2.272	0.140	Oct 2010	0.121	Oct 2011	-		0.121	Continuing	Continuing	Continuing
Management & Support Services	C/CPFF	Jorge Corporation:Lexington Park, MD	0.507	-		-		-		-	Continuing	Continuing	Continuing
All Prod Dev Cost from Program Implementation thru FY2002	Various	Various:Various	7.526	-		-		-		-	0.000	7.526	7.526
Subtotal			10.375	0.156		0.137		-		0.137			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			305.893	0.912		8.765		-		8.765			

Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy			DATE: February 2011
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
TACTICAL AIM MISSILES				
Acquisition Milestone - Block II: Milestone C - Block 2	3	2011	3	2011
Systems Development: Primary Hardware Development: AOTD P3I	1	2010	3	2010
T&E Milestones: Block II Development Test: Block II Development Test (DT-IIIC)	1	2010	3	2010
T&E Milestones: Block II Development Test: Block II v9.3 Development Test (DT-IIID)	3	2010	1	2011
T&E Milestones: Block II Operational Test: Block II Operational Test CATM (OT-IIIC) (1)	4	2010	1	2011
T&E Milestones: Block II Operational Test: Block II Operational Test AUR (OT-IIIC)(2)	1	2012	2	2012
T&E Milestones: Block II Operational Test: Block II v9.3 Integrated Development/ Operational Test (IT-IIID)	1	2011	2	2012
T&E Milestones: Block II Operational Test: Block II v9.3 Operational Test (OT-IIID)	3	2012	2	2013
Production Milestones: Contract Awards: Full Rate Production (FRP 6) Award Lot 10	3	2010	3	2010
Production Milestones: Contract Awards: Full Rate Production (FRP 7) Award Lot 11	2	2011	2	2011
Production Milestones: Contract Awards: Full Rate Production (FRP 8) Award Lot 12	2	2012	2	2012
Production Milestones: Contract Awards: Full Rate Production (FRP 9) Award Lot 13	2	2013	2	2013
Production Milestones: Contract Awards: Full Rate Production (FRP 10) Award Lot 14	2	2014	2	2014
Production Milestones: Contract Awards: Full Rate Production (FRP 11) Award Lot 15	2	2015	2	2015
Production Milestones: Contract Awards: Full Rate Production (FRP 12) Award Lot 16	2	2016	2	2016
Production Deliveries: Full Rate Production Deliveries Lot 8	1	2010	2	2010
Production Deliveries: Full Rate Production Deliveries Lot 9	4	2010	4	2011
Production Deliveries: Full Rate Production Deliveries Lot 10	4	2011	4	2012
Production Deliveries: Full Rate Production Deliveries Lot 11	4	2012	4	2013
Production Deliveries: Full Rate Production Deliveries Lot 12	4	2013	4	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy			DATE: February 2011
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Production Deliveries: Full Rate Production Deliveries Lot 13	4	2014	4	2015
Production Deliveries: Full Rate Production Deliveries Lot 14	4	2015	4	2015
Production Deliveries: Full Rate Production Deliveries Lot 15	4	2016	4	2016

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